OFFICE COPY

CACTUS AND SUCCULENT JOURNAL

Of the Cactus And Succulent Society Of America

XIX SEPTEMBER, 1947 No. 9

FIG. 86. *Idria columnaris* in the garden of Dr. and Mrs. Frank Cariss, La Canada, California.

CACTUS AND SUCCULENT JOURNAL

Published and Owned by the Cactus and Succulent Society of America, Inc., Box 101, Pasadena 16, California. A monthly magazine to promote the Society and devoted to Cacti and Succulents for the dissemination of knowledge and the recording of hitherto unpublished data in order that the culture and study of these particular plants may attain the popularity which is justly theirs. Subscription $3.00 per year. Foreign $3.00 per year by international money order. Membership in the Cactus Society free with subscription. Mail application to SCOTT HASELTON, *Editor*, Box 101, Pasadena 16, Calif. *Editorial Staff:* THE ENTIRE SOCIETY. Entered as Second Class Matter at Pasadena, Calif., under act of March 3, 1879.

XIX SEPTEMBER, 1947 No. 9

President's Column ..... Carl Brassfield 134
Succulent Collecting in South Africa ..... F. R. Long 135
The Flowering of *Portulacaria afra* Jacq. ..... J. R. Brown 140
Photos from Mexico ..... Miss I. Groth 142
New Species from Peru ..... John Akers 143
An Australian Collection ..... S. J. Atkinson 145
Cereusly Speaking ..... John E. C. Rodgers 146
Spine Chats ..... Ladislaus Cutak 147

PRESIDENT'S COLUMN

The Executive Board met at John Poindexter's Knickerbocker Nursery, Carlsbad, California, on Sunday, September 7. The enthusiastic group was agreeably surprised to see such a large number of the rarer cacti and other succulents, many of which were planted by John's father, the late Dr. R. W. Poindexter. Many of the plants had made exceptionally fine growth and in years to come they will be a source of seeds, as well as plants, for the collector. This is the most encouraging news we have to report to the many who are waiting to rebuild their collections but are as yet handicapped because of no source of supply.

There was some discussion about the Affiliates who often ask, "What do we get for Affiliating?" The answer is that by forming a local group, whose members also belong to the National Society, they share in adding strength to the purposes of the Society—which are to stimulate and maintain interest in our hobby. It has been our sad experience with many of the Affiliates that instead of increasing the number of members for the National organization it has resulted in just the opposite; after affiliation they subscribe for only one JOURNAL and pass it around to its members. If Affiliates are to be an adjunct to the Society, they should aim to have *all* their members take the JOURNAL—we can guarantee that it will not harm any cactophile even though it is temporarily on the scientific side. The only way we can increase the membership and have a larger JOURNAL is for all to belong to the National Society. In numbers there is strength and when you add helpful cooperation, the results are beyond comprehension.

The Editor promised us the reprinting of the Society By-Laws together with a detachable ballot in the November issue. He also promised to print the membership list as soon as there are 2000 three-dollar memberships. Here is something to work for.

The nominating committee was elected and will report at the open meeting of the Society which is to be held at Dr. and Mrs. Frank Cariss on Sunday, October 19. This is a rare opportunity to see Mrs. Cariss' collection which is a veritable cactus show as large as some that our Society put on in the early days. Members will have an opportunity to see one of the largest collections of Euphorbias besides the interesting out-door plantings. The hospitality of the Carriss home will be a treat in itself with the hostess furnishing the main items for a barbecue; the Society will round out the supper, so all you have to bring is yourself. This will go down as a red-letter day and is one of the reasons why you should be a member of the Cactus and Succulent Society of America. Mark your calendar now—no other notices will be sent: October 19. Gardens open at 2 p.m. with a short meeting later in the afternoon; supper about 4:30 with Kodachromes (we hope by Ted Taylor) in the evening. The address: 5050 Hooktree Road, La Canada. Go out Foothill Boulevard to La Canada, turn north on Oakwood and go to Hooktree Road and turn right —you can't miss it.

CARL BRASSFIELD
8060 Lankershim Blvd.
North Hollywood, Calif.

FORCING FLOWERS

Has any member tried the application of hormones or hormonelike-acting chemicals to encourage or "produce" blossoms; or, perhaps, hormones that produce excessive root-growth to make the cactus "pot-bound" and thus force "blossoming?" My-own experiments produced "no" blossoms whatsoever, but resulted in exasperatingly large quantities of offsets. Only the South-African plants behave in desirable ways, bloom in midsummer with large daisy shaped flowers.

H. V. B., New York.

FIG. 87. *Aloe africana* Mill. showing typical three branched inflorescens in Baakens River Nature Reserve, Port Elizabeth.

COLLECTING SUCCULENTS IN SOUTH AFRICA

By F. R. LONG

INTRODUCTION

I propose to present my subject in the form of five descriptive journeys made within a radius of 60 miles of Port Elizabeth. They are entitled:

(1) "A day's collecting between Port Elizabeth and Addo Drift on the Sundays River."

(2) "A trip from Uitenhage and Paardepoort."

(3) "Uitenhage and Springbokvlakte."

(4) "Port Elizabeth, Witteklip, Humansdorp, Hankey, and the Gamtoos River."

(5) "On the Zuurberg."

This area is as full of botanical interest, especially in regard to succulents, as any to be found in South Africa, and I dare say, in any other part of the world. The varied conditions in this confined area are brought about by (1) the coast-line with sea humidity and sand-dune formation, (2) the eastern extremity of the western Cape flora to the west near the coast, (3) the intrusion of the Karroo flora to the northwest with altitudes up to 6,000 feet, (4) the unique Addo Bush to the north (with its elephants) and (5) the mountain flora of the Zuurberg. Each area possesses to a large extent a distinct flora.

Within this radius are to be found Aloes, Apicras, Haworthias and Gasterias; 2 Testudinarias; Mesembryanthemum and allied genera, namely: *Bergeranthus, Delosperma, Faucaria, Glottiphyllum, Lithops, Trichodiadema;* Asclepiads, such as *Duvalia, Ceropegia, Huernia, Pectinaria, Piaranthus, Stapelia; Adromischus, Cotyledon* and *Crassula; Kleinia* and *Senecio; Euphorbia;* 2 Pachypodiums; Cycads (*Encephalartos*); as well as other genera containing succulent species. Well known genera such as *Erica, Pelargonium, Lobelia, Nemesia, Dimorphotheca, Plumbago, Gazania, Agapanthus, Freesia, Gladiolus* and *Ornithogalum,* are also represented here. This district is surely a botanist's paradise and a succulent collector's happy hunting ground!

Part I

As we left Port Elizabeth by car early one morning, we came over hills of bare, harsh, laterite rocks, overlooking Algoa Bay. Here where most of the natural growth had been eaten out long ago by goats and donkeys, we soon found the following Euphorbias not far from a row of modern villas: *Euphorbia gorgonis* Berg., *E. globosa* Sims, *E. pubiglans* N. E. Br., *E. stellata* Willd., *E. elliptica* Thumb., with an occasional *Huernia Thureti* Cels., and the recently described *Gasteria Stayneri* Poelln. Then passing through the native township of New Brighton, down on richer ground the first *Euphorbia Ledienii* Berger and *E. clava* Jacq., were spotted. The first five mentioned Euphorbias are found in poor, stony soil on laterite slopes facing north, fully exposed to the sun's heat, well-drained, with only very short, scanty vegetation of grasses, Lobelias and odd Legumes to protect them. Although there is no frost on these hills, it can be cold in the winter and it is always windy.

Nearby, but on the south side and among denser, sheltering bush, a few *Haworthia fasciata* Haw., were located growing with Freesias and Ornithogalums.

Passing on, the mouth of the Zwartkop (Black Peak) River was reached at the 10th mile with its wealth of salt-marsh flora and fauna. As we climbed out of the flats past the brick-works, we saw a beautiful, red flower spike about 15 inches high among the grass. This proved to be *Aloe humilis* Mill. Just before this, however, a peculiar little hill attracted our attention for we spied a clump of *A. lineata* Haw., and in looking around we were amazed to see *Faucaria lupina* (Haw.) Schw., among *Delosperma echinatum*—the prickly hedgehog Mesembryanthemum. Dr. L. Bolus, who has done so much

FIG. 88
Euphorbia clandestina from West Province.

work on the genus *Faucaria,* would not believe that there existed a *Faucaria* growing within the sea-air belt, until I showed her this spot a few years ago.

Opposite to the *Aloe humilis* area and overlooking the sea, we were lucky to find a lone clump of the rare Cycad, *Encephalartos horridus* Lehm. This species has a trunk two feet high and always grows in good, loamy soil, well-drained, but in areas subject to periodical droughts. Round about were large patches of *Haworthia attenuata* Haw., often several feet in diameter, packed closely together with mats of *Bergeranthus vespertinus* Schw., and clumps of *Rhombophyllum rhomboideum,* both "Mesems."

We were now within a few miles of Thunberg's classic area, "Swartkops Zoutpan" (Saltpan). *Euphorbia meloformis* Ait., was plentiful among flat, grass-meadowland on limestone, but alas, there was evidence that hundreds had been removed recently by ruthless collectors, no doubt. Scattered around but in isolated bushes, seldom in the open, was *Euphorbia clava* Jacq., *E. tubiglans, E. mammillaris,* and *E. clandestina.* These four species worry amateurs quite a lot. Some 50 miles inland, *E. valida* Dyer, superceeds *E. meloformis* Ait., which it closely resembles in general appearance.

We had now reached the outlying clumps of

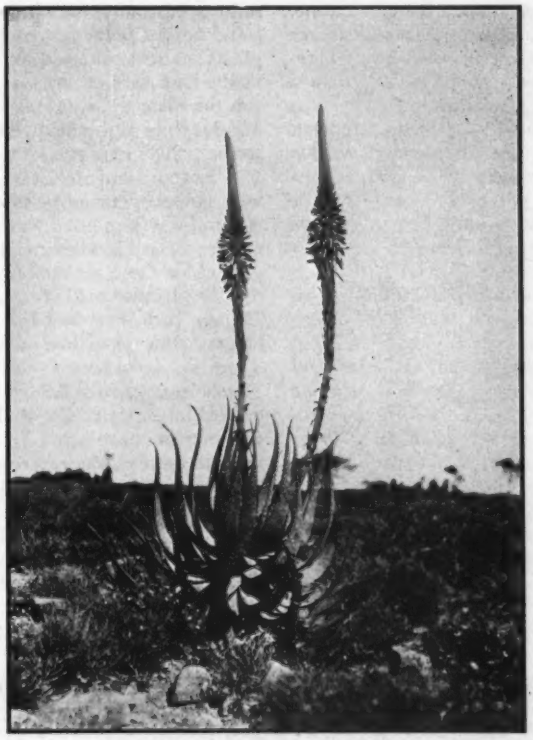

FIG. 89. *Aloe microstigma* Salm Dyck. From Succulents for the Amateur.

the Addo Bush which here about had been cleared for farming, leaving the less fertile hill-tops and steep kloofs intact. Here was *Aloe striata* Haw., that queen among the genus, the "Coral" Aloe with pinkish, glaucous leaves, margined in pink with brilliant, crimson flower-heads 3 feet high. Three other Aloes here were *A. africana* Mill., *A. supralaevis* (*A. ferox* Mill.), and *A. pluridens* Haw., with an occasional hybrid showing intermediate forms.

Opposite Coega Kop—the eastern extremity of Table Mountain sandstone outcrop — we searched around the bushes for *Haworthia longiaristata* Poelln., and found it along the edges in bush soil on well-drained slopes in part shade. The softer or more translucent species are usually found on a south or eastern aspect away from the heat of the sun. On the top of the "kop" are some grand clumps of that rare and noble plant, *Strelitzia juncea* (*parvifolia*), also *Gasteria maculata, Chamaealoe africana* and *Haworthia Stayneri* Poelln.

In this area were numerous plants of *Crassula perforata* Thun., *C. falcata* Wendl., and a few miles further on *C. perfoliata* L., with patches of *Adromischus rhombifolius* (Haw.) Lem., in the more shady spots under bushes. *Orthopterum Coegana,* that rare "Mesem" endemic to Coega Kop, is only found here. Stapeliads were represented by *Huernia primulina* N. E. Br.

So far we had traveled less than 20 miles on a good tarred road—the main north road to Cradock, Bloemfontein and Johannesburg. We were rapidly passing through more typical Addo Bush which here is largely composed of "Spekboom," *Portulacaria afra* Jacq.,—a grand sight in November with its masses of mauve to pink flowers, *Grewia occidentalis* L., *Olea capensis* Linn., *Rhus Legattii,* Schonl., *Pterocelastrus* sp., *Euclea lanceolata* E. Mey., *Zygophyllum uitenhagense* Sond., *Gymnosporia acuminata* (Linn) Szysz., *Ehretia rigida* Thunb., to mention a few, besides the Aloes and Euphorbias already noted. The growth of the bush does not exceed 15 feet in height, and in most places is dense but with occasional open glades. The soil generally

is a rich loam and parts are overlying limestone.

We were soon crossing an open, high, flat area over limestone. Here masses of *Sutera microphylla* (L. f.) Hiern, tinted the landscape a lovely violet purple, reminiscent of Scotch heather at a distance. Although not a succulent, one cannot overlook this little-known, garden plant. The brilliant yellow of *Gazania longiscapa* D.C., made a gorgeous contrast to the *Sutera*. We were now losing height, for we were coasting down a long incline to the valley of the Sundays River, stopping at frequent intervals to search for Stapeliads and Haworthias. The inconspicuous *Pectinaria saxatilis* N. E. Br., was discovered on the edge of some bushes in the shade, spreading itself among leaf-mold and rooting along the prostrate stems. Then we found a peculiar plant, a dull, dark, olive-green, miniature Aloe, 6 inches high with 5 to 7, pointed leaves. As a matter of fact we had outspanned to enjoy a flask of tea and cakes under the shade of a bush when my daughter exclaimed, "what is this funny looking plant?" At once my mind went back to Salm Dyck's "Monographia Aloe et Mesembryanthemi," which I had recently borrowed from the Port Elizabeth Public Library—(I was the first person to borrow it within living memory!) I could not get home fast enough, for those three plants we had collected were "burning a hole" in the back seat of my car. Sure enough there was the plate, *Aloe* (*Haworthia*) *sordida* Haw. My daughter had rediscovered it, the first to do so for many a long year.

A large field of *Aloe microstigma* Salm Dyck, with flower spikes of yellow and crimson flowers, and leaves mottled with white spots, were a feature here. Scrambling up onto the higher ground we came across a few fine specimens of the "Elephant's Foot," *Testudinaria elephantipes* Thunb., both male and female plants being in bloom. One chap had a huge bole standing 4 feet high by at least 3½ feet in circumference. The bole is usually hidden in dense bush but the twining growth, especially when in flower, smothers the bushes and "give the show away." I often wonder why more seedling plants of 2 to 8 years are not found in succulent collections as they are easily grown and are definitely interesting. I collected seed on a later trip and distributed it all over the world. I do not believe the large plants are the great age that most collectors are led to believe. Incidentally *Testudinaria sylvatica* Knuth, is found in the original

FIG. 90
Haworthia attenuata Haw. growing in full sun at Addo Drift, Sundays River, with *Aloe striata* Haw. on the right.

bush land of one of the Port Elizabeth cemeteries.

Hereabouts were masses of *Haworthia attenuata* Haw., both in the shade of bushes and in full sun, the latter looking the worse for wear. Higher up on the ledges of a krantz (hill-face or cliff) we found a small *Haworthia* of the *setata* type, still unnamed as far as I know. Nearby a white form of *Crassula perfoliata* was spotted amid a tangled mass of the following plants: *Aloe striata* Haw., *Euphorbia mauritanica* L., *E. inermis* Mill., with its rosettes of finger-like growths with white flowers, *E. Ledienii* Berger, *Sarcostemma viminale* (L) R. Br., *Rhigozum obovatum* Burch, with canary-yellow flowers, called "Wild Pomegranate," masses of wild Asparagus with vicious thorns, and here and there two species of *Pachypodium, P. succulentum* (L. f.) D.C., and *P. bispinosum* (L. f.) D.C., with *Portulacaria afra* Jacq., everywhere. Let me utter a warning to would-be collectors of *Pachypodium*—you do not dig, you excavate—you start in at a radius of 3 feet with a strong pick and a 4-foot crowbar, and get well down out of sight before undermining the root! It is enormous and easily damaged.

Clumps of *Cotyledon coruscans* Haw., in the open were seen at frequent intervals, untouched by animals, while *Gasteria maculata* (L.) Haw., made a brave show in the undergrowth with its beautiful pink and white flowers hanging so gracefully on a 2-foot stem. Gasterias seem to enjoy more shade than most Aloes, but both stand a lot of neglect. If thrown down on soil, they will soon root, flourish and flower without care or water.

Two interesting Ceropegias were found near the *Haworthia sordida* spot, *C. stapeliaeformis* Haw., with its chocolate and white colored flowers and *C. ampliata* E. Meyer, with greenish yellow balloon-like flowers, clambering over small bushes. The former species has a wide distribution in the Eastern Province and we shall come across it in other journeys. Both were growing in leafmold under bushes.

I had almost forgotten a well-known plant in "home" collections, *Senecio* (*Kleinia*) *radicans* D.C., almost too common in this area even to mention, for it is evident everywhere.

As we approached the river, we found *Euphorbia polygona* Haw., with growths 3 to 4 feet high, on a steep well-drained slope with carpets of *Glottiphyllum* sp. nearby. This *Euphorbia* was infested with that minute parasite *Viscum minimum* Haw., the smallest "mistletoe" known—what a strange association!

We had to turn the car around and make for home if we were to reach Port Elizabeth, 23 miles away, before dark. We had spent a grand, beautiful, and interesting day. Moreover we were on classic ground, for hereabouts Thunberg said in his travels that the area was so arid and the water so scarce that he turned north (ultimately to Graaff Reinet).

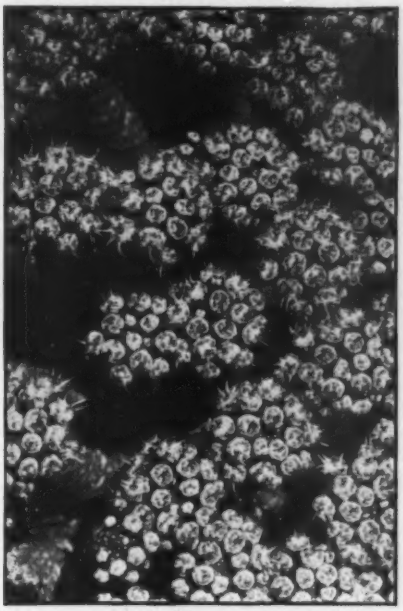

FIG. 91
Addo Drift.
Euphorbia inermis Mill. Sundays River Valley,

I have endeavored to keep my tale to succulents but it must not be overlooked that much of the beauty came, not only from the blue sky, but from countless flowering plants such as Ornithogalums, Watsonias, Freesias, and *Lachenalia,* not to mention a few bulbous plants, besides flowering shrubs such as *Erica cerinthoides* L., *Lobelia coronopifolia* L., *Polygala myrtifolia* L., *Vernonia capensis* Druce, *Metalasia muricata* L., *Gamolepis euryopoides* D.C., and species of the following genera: *Hermannia, Helychrysum, Indigofera, Euryops, Sutera, Dimorphotheca, Gazania,* etc.

To be continued

PHOTOGRAPHS OF CACTI

These photos by Miss I. Groth won first, second, and third prizes at the Cincinnati Convention. List of 200 different subjects or send $1.00 for six (9x12 cm.) our selection.

FERNANDO SCHMOLL

Cadereyta de Montes Quo., Mexico

FIG. 92
Furcraea longaeva growing at 8,500 ft. altitude on Cerro Costoche, west of San Andrés Tlahuilotepec, Oax.

A TREE-LIKE SUCCULENT

A picture of this species appears on the cover of the Cactus and Succulent Journal for Oct., 1946. At that time the writer did not know the plants identity and was in error—fell into some botanical hot water—by substituting Agave for the, almost foolproof, Mexican term, Maguey.

The high altitude habitat of *F. longaeva,* subjected to heavy freezes, suggests it as adaptable for many areas in the U. S. In this connection it is interesting to note that, as far back as 1875, two specimens are recorded as having flowered in a garden on the Scilly Isles of Cornwall, England. In these islands it is said that temperatures seldom vary outside the limits of 40° and 60° F., but frosts and snows do occur, and winds of hurricane velocity are frequent.

As if not content to climb higher, *Furcraea longaeva* also grows taller. When in bloom it apparently rises high above all other Magueyes.

T. MACDOUGALL.

THE CACTUS AND SUCCULENT SOCIETY OF AUSTRALIA

This society has again been organized after recession during the war years and is now growing rapidly in membership. The following competitions are stimulating interest:

(1) The one who attends most meetings in the year.
(2) The member who nominates most new members.
(3) The member who exhibits most plants in public places, i.e., horticultural shows, etc.
(4) A monthly points competition (aggregate basis), yearly total.
(5) A grafting competition for open and novice sections.

Enthusiasm is running high and many fine plants are tabled each meeting. Office-bearers are: President, Mr. H. Ward; Secretary, Mr. L. Fuaux; Treasurer, Mr. J. Newell; Vice-Presidents, Messrs. R. Price and A. Robinson; Committeemen: Messrs. S. Wilson and A. Williams.

PRONOUNCING GLOSSARY—Marshall & Woods. Collectors and beginners have demanded information so that they may be able to pronounce these "terrible" cactus names. 120 valuable pages. Cloth bound $3.15. This Glossary includes all terms used in the description of cacti with hundreds of suitable illustrations.
Box 101 — Pasadena 16 — California

THE FLOWERING OF PORTULACARIA AFRA Jacq.

By J. R. BROWN

This succulent shrub is very well known, but very seldom is it seen in the flowering stage.

Branches in flower have been sent to me several times from San Diego, but due to the time in transit the flowers had withered and the buds failed to open after arrival. Some time ago, however, branches in flower and bud were received from Mr. E. C. Hummel of Inglewood and some photographs of this material are presented here.

The flowers, while individually very minute make up for this by the incredible profusion of their numbers. The flowering shoots at the tips of the branches are short, and bright green in color. The flowers seem to be in 3s, the middle one being the first to open, but these little groups of 3s are crowded in fascicles containing a very large number of flowers. In the bud stage the color is a deep pink, but the tiny flowers open very pale rose.

In those areas of South Africa where this shrub is very predominant, as in the Addo bush near Port Elizabeth, the entire landscape is given a note of pink coloring at the time of flowering.

Conditions which seem to induce the flowering of *Portulacaria afra* or "Spekboom," are,

quite old plants growing in intense sunlight and which have been subjected to a long period (months) without water, so that the plants appear in a shrivelled state and are by no means attractive. After this long drying period, when the rains start or water is given otherwise, the plants seem to flower freely. In the vicinity of San Diego, California, it frequently flowers during late October and November after the first rains of the season in that area.

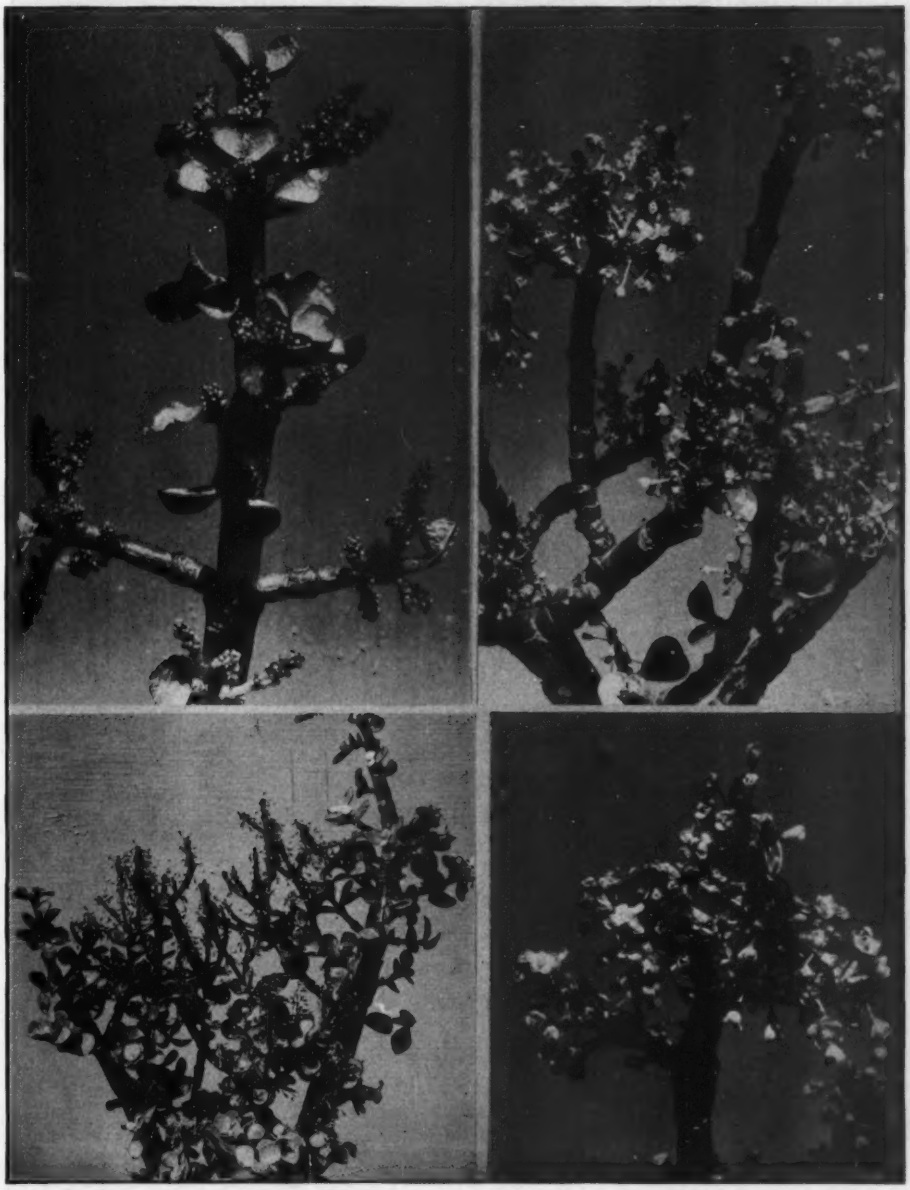

FIG. 93. *Portulacaria afra* Jacq. *Upper left:* Branch tip in the bud stage, nat. size. *Upper right:* Branch tips flowering, nat. size. *Lower left:* Branches showing the profusion of flowers, reduced. *Lower right:* Flowers and buds, approx. x 2.0

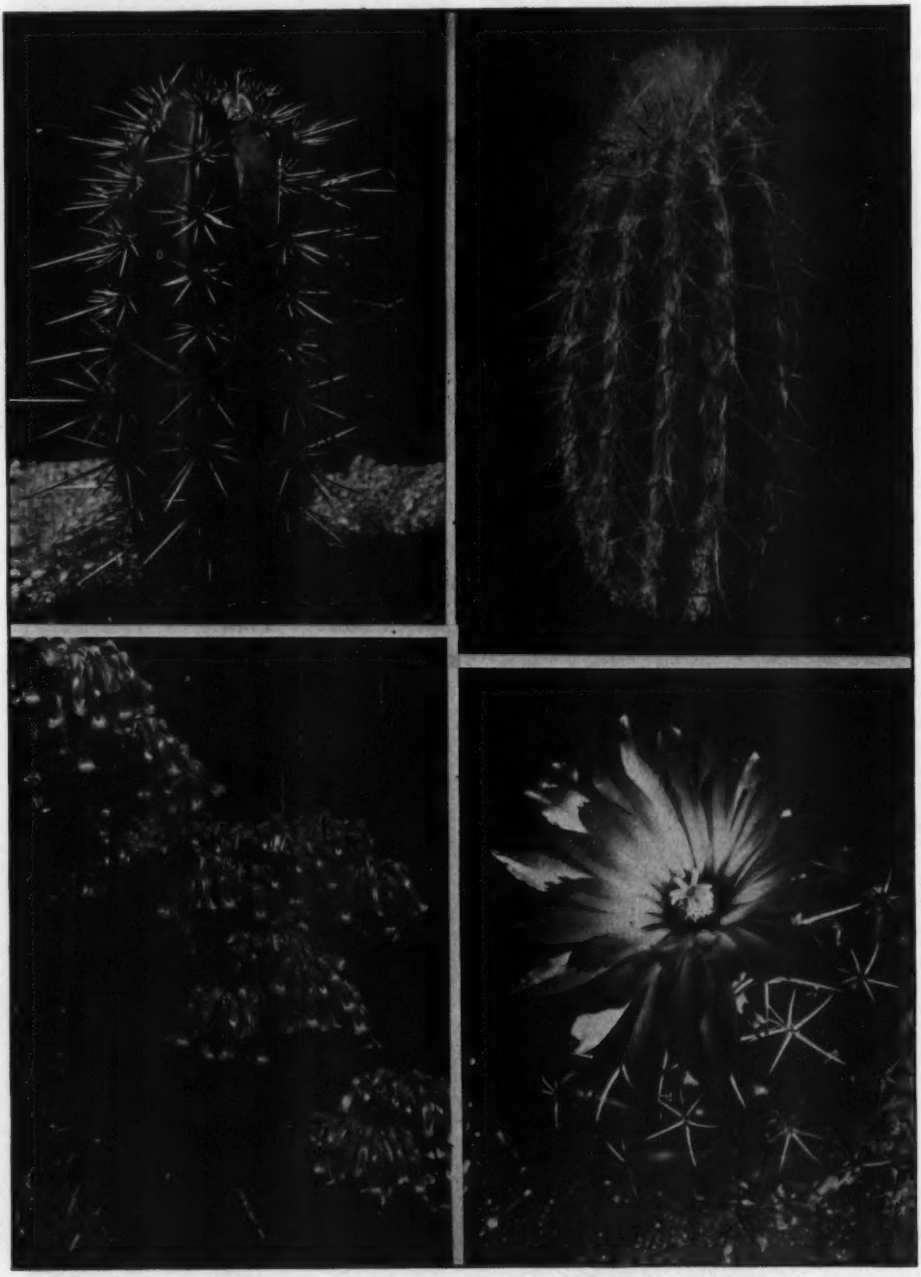

FIG. 94
Four sample Groth photographs selected from the 200 as advertised by F. Schmoll, Mexico. Top left shows *Lemaireocereus clavatus;* Top right *Cephalocereus chrysacanthus;* Lower left *Kalanchoe tubiflora;* Lower right *Coryphantha elephantidens.*

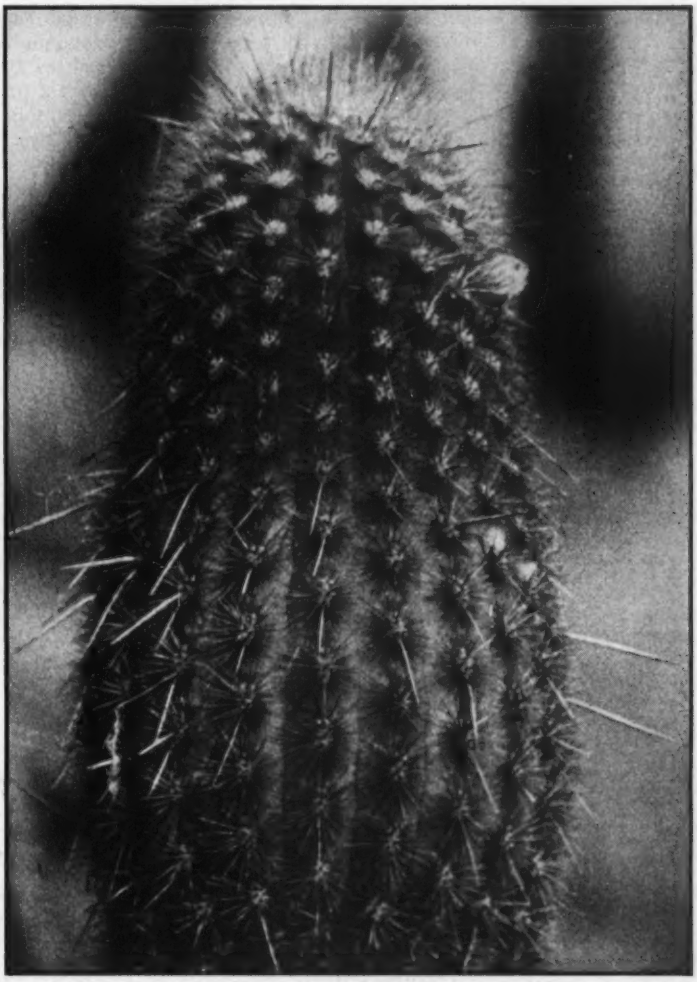

FIG. 95. *Peruvocereus viridiflorus* sp. nov.

NEW SPECIES FROM PERU

By JOHN AKERS

Peruvocereus viridiflorus sp. nov.

Plantae columnares ex basi ramosae circa 1 m. altae 7 cm. diametro; costae 19-20 depressae; areolae ovales tomentosae 5 mm. longae 3.5 mm. latae 1.5 mm. altae pilos cincinnatos albos brevos circa 60 spinas aciculares flavas vel sucineas 5 mm. longas gerentes; cortex viridis; spinae centrales per occasionem aciculares acres deflexae ad usque 2.5 cm. longae flavae demum cineraceae, setis pilisque nullis; flores anguste infundibuliformes demum brunnei in fructibus persistentes, tubo circa 6.5 cm. longo angusto viridi squamato, squamis angustis apiculatis pilos numerosos albos ad usque 2 mm. longos in axillis squamarum gerentibus, limbo rotato circa 4.5 cm. lato, segmentibus interioribus spathulatis viridibus vel virido-albescentibus atro-viridibus centraliter, segmentibus exterioribus reflexis flavo-viridibus apice rubro-brunneis; ovarium viride squmatum pilosum pilis albis; stamina numerosa inclusa, filamentibus viridibus, antheris eburneis oblongis; stylus viridis inclusus, lobis stigmatum 10-18 viridoflavis 8-9 mm. longis; fructus globosus vel turbinatus circa 4 cm. diametro purpureo-ruber ad basem viridescens squamatus, squamis anguste apiculatis ad usque 3 mm. longis carne fructus virido-alba; semina parva nigra punctata; radices lignei, coritice squamato.

Plants columnar, branching from the base to form groups of 10-20 stems to 1 m. high, about 7 cm. in diameter; ribs 19-20, low; areoles felted, oval, 5 mm. long, 3.5 mm. wide, 1.5 mm. high, about 1 cm. apart, filled with short, white, kinky hairs and bearing about 60 acicular, pungent, yelow to amber spines aboutl 5 mm. long; epidermis sage-green; central spines occasionally acicular, pungent, deflexed, to 2.5 cm. long; all spines at first yellow, afterward turning gray; bristles and hairs lacking; flowers narrowly funnelform, turning brown and persistent on the fruit, the tube about 6.5 cm. long, narrow, bright green, with small, slender, apiculate scales that have numerous short, white, silky hairs to 2 mm. long in their axils, the limb rotate, about 4.5 cm. broad; inner perianth-segments spatulate, apiculate, green to greenish white, with a darker green stripe down the center; outer perianth-segments reflexed, yellow-green, tipped with mahogany-red; ovary bright green, scaly and white-hairy; stamens numerous, included; filaments greenish; anthers oblong, ivory-colored; style included, deep greenish; stigma-lobes 10-18, greenish yellow, 8-9 mm. long; fruit globose to turbinate, over 4 cm. in diameter, puckered at the base of the withered flower, its epidermis papillate, plum-red, shading into green at the base, pulp greenish white in translucent globules, acidic, edible; areoles on fruit about 12 mm. apart, with minute scales bearing tufts of white, silky hairs to 3 mm. long in their axils, the scales with a narrow amber apiculation; seeds small, black, shiny, punctate; hilum small, narrow, dark gray; roots thick, woody, with scaly bark.

Type locality: Canta road in the Rio Chillon Canyon about 10 kilometers above Santa Rosa de Quiver.

This is one of the few non-bristly Peruvocerei, but it is still an attractive plant. Although the color of the flowers varies on the same plant, they occasionally produce a true green flower which is the greenest of all cactus flowers seen by the author. The plants grow on stony mesas at an elevation of about 5,000 feet. They are associated with a wild shrubby fig, a Jatropa-like plant with white flowers, *Neoraimondia macrostibas, Espostoa melanostele,* and *Binhamia acrantha* and Milas.

This plant is a rather sparse bloomer, producing only a few sporadic flowers per season. Like most of the hot, lower elevation species, the lower part of the body turns black due to the blackening of the spines. It grows well in cultivation and stands considerable water in the growing season.

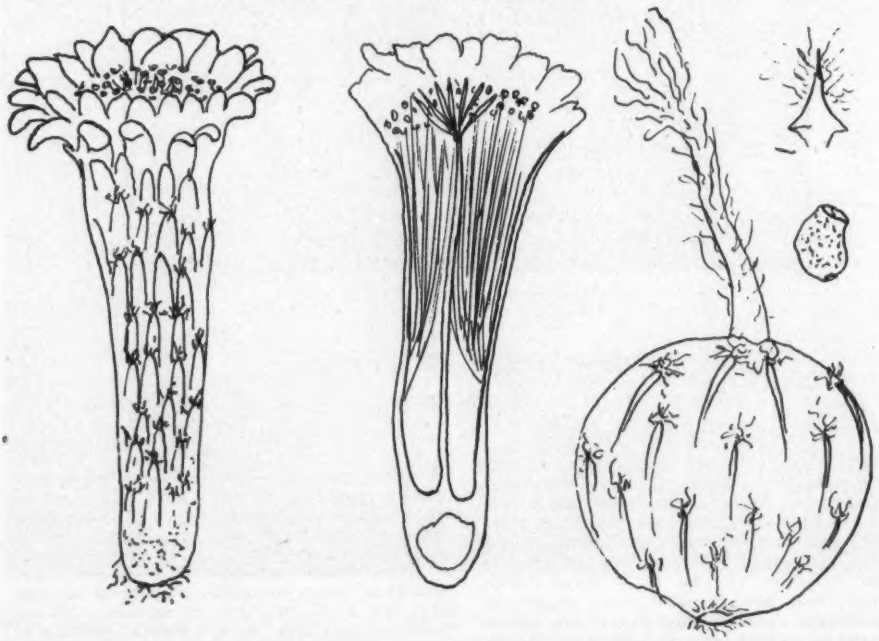

FIG. 96. Flower, fruit, and seed of *Peruvocereus viridiflorus* sp. nov.

FIG. 97. Rockery 25 ft. x 2½ ft. Contains 170 different plants.

AN AUSTRALIAN COLLECTION

Grown by S. J. ATKINSON

I have been a cactus and succulent enthusiast for about ten years. My smaller and rarer plants are nearly all grown on an outdoor rockery, sheltered by the house wall and facing North-East, (with us "down under" North means the noonday sun). The larger and hardier plants are grown on two larger rockeries further out; the total area occupied being about 350 square feet, and growing a total of about four hundred different varieties.

The rocks used, carried in some instances for hundreds of miles by motor car, are all selected for colouring and shape, and are mostly souvenirs of pleasant outings. The soil consists of rich loam from the vegetable plot, mixed with about equal quantity of coarse, clean sand, with leafmold, lime and charcoal added. Last spring I top-dressed the rockeries with super-phosphate with very satisfactory results. The plants are heavily watered in dry weather, and nearly all flower generously.

Our rainfall is around fifty inches; winter conditions are cold and wet—no snow and little frost; summer is short with few hot days. Plants start growing about November and continue until April or May—although in the open during the winter, losses are few.

African plants as *Lithops* and other stone plants are quite at home in a dish, covered in the winter with a sheet of glass, supported a few inches above them. Left outside, they are kept dry and get any sunshine available. Seedlings and other small cacti are treated in a like manner.

My plants are a representative collection: Opuntias, (many of these are difficult to keep within reasonable size), Echinocereus, others of the Cereus family, Lobivias, Echinopsis, Rebutias, Astrophytums, Ferocactus, Notocactus, Stenocactus, Gymnocalyciums, Mammillarias, etc. *Pelecyphora aselliformis* has grown and flowered in the open for nearly ten years.

Succulents are represented by Euphorbias, (a *E. Caput-Medusae* has a 3½ ft. spread, with hundreds of branches, many are forming heads and several cristate branches, some have been

rerooted).--Agaves, Aloes, Gasterias, Haworthias (which don't like the winter rain), Aeoniums, Echeverias, Andromischus, Sempervivums, Crassulas, Sedums, Dyckias, Faucarias, Cheiridopsis.

Orchid cacti are kept potted; in summer, outside among shrubs, in partial shade; wintered on the verandah; they flower well.

Special leaf succulents, as *Graptopetalum paraguayense, Echeveria pulvinata, Sedum Adolphi, Pachyphytum,* etc., are kept in pots on the verandah (on the sunny end) to protect from hail. Pests are not serious, a few spine mealy bugs, millions of ants which are banished by a D.D.T. powder; snails, slugs, and slaters (sow bugs), do not present much trouble, as suitable hiding places are few, and a few night raids keep them at bay.

If the foregoing may prove of interest to fellow Cactophiles, you may apply it to any use you think fit; and to you, Mr. Haselton, I tender my regards and thanks for the literature which adds so much to a very worthwhile hobby.

Sept. 1. Coolest August in the history of the Cleveland, Ohio, weather bureau. Watered plants thoroughly. Hope the outside residents do not move in with the plants that are now ouside. Don't like displaced bug population. *Caralluma foetidus* bloomed; star-shaped, long stemmed flower with hairs hanging from edges of flower. Yellow background with red markings which almost cover up the yellow, starting about ¼ inch from center.

Sept. 3. Large Selenicerei need repotting; they stopped putting out new growth in the spring—danger sign for me although some growers say mature plants do not grow regularly.

Sept. 5. Bought four glass sprayers to use with my numerous sprays. Keep each one filled—"Black Leaf 40," "Sheps," "Greenhouse Volck," and wood alcohol and water (equal portions). Keep spine bugs down with one of these. Thrips are controlled with "Black Leaf 40." Euphorbias that I thought were never attacked by any known greenhouse pest, has waxy mealy bugs without "meal." More easily controlled than the regular variety. Use contact spray.

Sept. 6. Aloes showing green again after the summer "bleaching." Cooler weather always improves their looks. *Pseudorhipsalis macrantha* budded under the grape arbor. *Epiphyllum cartagense* and *E. stenopetalum* bloomed. Are similar in shape of flower and petal width but branches are different. The latter usually throws buds from near the tip of the branch; branches from bottom while *E. cartagense* produces new branches from the older stems. *Crassula falcata* bloom head is drying up; started to bloom Aug. 9.

Sept. 9. Astrophytums did not grow as fast this year. Top dressed them late this year. Will repot the whole lot in March or April. Too early for buds on *Zygocactus truncatus;* have kept it on the dry side since last August. Buds on *Epiphyllum Darrahii* about 2½ inches long. Trying to increase the number of cacti that I bloom this year; behind 12 species so far.

Sept. 13. *Huernia Penzigii, aspera, oculata,* and *Schneideriana* in bloom. Have eight other species just getting enough growth from cutting stage to support blooms. *Euphorbia obesa* (7 inches tall) full of staminate flowers. Saw several pistilate flowered ones at Hirt Bros., Strongville, Ohio, at $2 each.

Sept. 16. *Stapelia nobilis* bloomed; fly eggs covered entire center of flower—hope some luckless fly has pollinated it. Met Epiphyllum enthusiast, Dr. James Machwart; he is using thoroughly decayed cow manure for his plants. The only disadvantage he sees is that the plants grow so fast that they drop down over the edge of the pot and tear themselves out of the soil. Blooms large and colorful, yes.

Sept. 19. *Epiphyllum Darrahii* bud is four inches long. *Selenicereus donkelaeri* and *S. hamatus* have new shoots. Top dressing of sand and "aged" chicken manure is pepping up all of the Selenicerei. Bloom best for me when pot bound which usually means new stem replaces an old one.

Sept. 20. Wonder how our oil burning friends (Prof. Otto La Porte et all) are stacking up with blooms and growth. Hard coal is my source of heat. Have used vented gas heater, too. Mrs. Henry Mach uses a vented gas heated water radiator. Looked at the new portable electric heated hot water heaters. Look like the coming thing to me, especially with fan attachment.

Sept. 22. Pereskias have all grown well and sent roots through drainage hole into soil. *P. aculeata* var. *rufida* vined up into the grape arbor. So far I've had only three blooms: *P. aculeata, P. bahienses,* and *P. grandiflora. P. aculeata* is a beautiful white tinged with yellow, while *P. grandiflora* is a rich reddish pink-white; *P. bahienses* is a shell pink. Grow mine in well-drained garden soil with well aged chicken manure.

Sept. 25. *Pseudorhipsalis macrantha* buds about one inch long. New shoots appear after the flowering season. Most of the five species of Faucarias are budded. Buds ¼ inch long on *Zygocactus truncatus. Schlumbergera Russelliana* (Christmas Cactus) has stopped growth and joints are ripened ready for buds.

Sept. 27. Oh! to have a *Trichocereus Schickendantzii* that grows for me. Mine looks worse than when I bought them as three-inch seedlings.

Sept. 30. Thirteen days of sunshine. Warmer than August to be sure. Ideal weather to ripen my plants for winter rest. Dry month, too. Have my school window sills arranged with collections of African succulents as well as American. Parallelism is pointed out between globular and columnar American cacti and African Euphorbias. Gave available cuttings of plants to some 150 eager youngsters. Some said for their aunts or mothers but they carried them home. Plant lovers (cactophiles) are made, not born, brothers and sisters of the order of cactophiles.

ARTICLES WANTED

JOURNAL readers have asked for articles on culture and description of climatic conditions for the different states. We would like to start with an article "Growing Cacti in Texas," and follow with one for New York State. The increasing interest around Detroit, Michigan, should produce an article for their state.

SPINE CHATS

LADISLAUS CUTAK

Mexico City is truly one of the most beautiful cosmopolitan centers in the New World. Its beauty is only excelled by the hospitality of its inhabitants. Particularly I want to stress my first acquaintance with such citizens as Dr. Juan Iwersen, Christian Halbinger Gunther Boker and several others, including, of course, their respective families. Sooner or later I'm going to get you acquainted with these folks—for they were of immeasurable help to me during my stay in Mexico.

For obvious reasons when I first planned my trip I had no intentions to linger long in the Mexican capital. My mind was made up to see as much of the countryside as possible where economic conditions were more suitable to my pocketbook. However, upon my arrival in the Isthmus a letter was awaiting me at Hotel "La Perla" and its contents were so enticing that I could not refuse an invitation to be the guest of Dr. Iwersen. He had offered to take me to Zopilote Canyon in the State of Guerrero, where I was intent on clarifying the status of *Acanthocereus maculatus* (which I believe is a true *Peniocereus* instead) and to get habitat pictures of the curious *Peniocereus Fosterianus* from Tierra Colorada. Later, due to unforeseen circumstances, this trip had to be shelved.

Dr. Iwersen is one of the busiest medicos in Mexico City and a well known gynecologist. He has a charming wife and four of the nicest girls you'd want to meet. The oldest girl, Gerda, is preparing for the medical profession, Ine is leaning towards chemistry, Helga is studying botany and Gesche is still too young to choose her career. I was a perfect stranger to them all, yet they made me feel so at home it appeared as if I had known them all my life. And when the girls baked those delicious cookies for my stay with the Schmolls in Cadereyta—well, how could I ever forget them!

Dr. Iwersen, despite his exacting profession, still finds time to putter around with his cacti. He confided to me that he'd like to forsake his practice before he gets too old and devote more time to his hobby and to the study of cacti in their habitats.

The Iwersen home is a very cozy one indeed. Oil paintings and water color sketches hang on the walls. The yard is resplendent with showy perennials and annuals. Climbing roses of dark red, pink and yellow hug the sides of the house. Bougainvillea flowers drape the entrance to the yard. White and blue Iris line the walk leading to the home. Beds of pansies, dianthus and blue-bells, along with rosebushes, form the main garden. A tall privet hedge ,sheared and trimmed, makes up the west boundary fence. Against the ivy-covered east wall there stands a 22 x 18 ft. open house with an overhead roof of glass. This is where the doctor keeps his choice plants. A two-tiered shelf extends on three sides of this house and upon it are kept potted plants or orchid cacti, sedums, and miscellaneous other succulents. A slightly raised bed with undulating contour occupies the foreground and is filled with many interesting Mammillarias, Coryphanthas, Neolloydias, Astrophytums, Echinocerei, and other cacti. The largest plants are Ferocacti and a beautiful "golden ball." *Selenicereus hamatus* twines on the front posts and girders and at the time of my stay was producing many buds. To the left of the structure stands a large tree and suspended from its trunk is an original clump of "Empress"—the early blooming, apple blossom pink, basket type *Nopalxochia* collected in the State of Vera Cruz. Two rectangular beds on the right of the house are filled with aloes, agaves, gasterias, kleinias, euphorbias, aeoniums, echeverias, sedums, crassulas, mesembs. and cotyledons. A very striking *Hectia* with ox-blood red leaf margins struck my fancy and later I was to collect it in a barranca of Rio Tuxpan in Michoacan but the single specimen died in transit.

Dr. Iwersen is interested in *Acanthocereus* and *Hylocereus* and pointed out several kinds growing in his yard. He graciously let me have cuttings of whatever I desired and now I'm making observations on those that show deviation from published species.

Heart rots, according to Ross W. Davidson and James L. Mielke, pathologists of the Bureau of Plant Industry, United States Department of Agriculture, are common in most trees and sometimes occur in shrubs with small woody stems, but wood-decaying Hymenomycetes have not been reported as causing decay of the woody skeleton in living cacti. However, in 1941, during investigations of disease and decline of the Saguaro in Arizona, L. S. Gill and P. C. Lightle, associate pathologists, observed sporophores of a Heart-Rot Fungus on the bark-like tissues at the base of arms of living plants and also near the base of the main stem on ribs exposed as the result of injury. Specimens of this fungus were collected and sent to Davidson for identification. Later additional collections were made from cholla cactus and other desert shrubs and trees. The sporophores were studied and comparisons made, whereby it was found that they closely matched *Fomes robustus*. The *Fomes* on the Saguaro is most commonly found on the hard, bark-like outer tissues at arm bases and occasionally occurs near the base of the main stem on woody ribs exposed as the result of injury. On chollas the sorophores develop on the main stem generally near ground level but occasionally they are found as high as eighteen inches above it. They occur at branch stubs or on injured areas where the woody skeleton is exposed. Decay is sometimes found extending upwards well into the branches or to a height of four feet or more.

Nova Scotia, the most eastern of the provinces of Canada, has a length of about 340 miles and an average width of 50 miles, and consists of a peninsula joined to the mainland by the low swampy Isthmus of Chignecto in addition to the Island of Cape Breton and two smaller ones. *Sedum roseum* grows in crevices of rocky cliffs in the colder parts of the shoreline. *Sedum stoloniferum* was introduced from Asia and usually grows in large patches, with the matted prostate stems on the surface of the ground. *Sedum acre* and *S. triphyllum* have been introduced from Europe, the former an escape on ledgy roadsides or moist roadside banks in the southwestern counties while the latter is widely distributed in moist areas, often at the edges of thickets.

MONTHLY SPECIAL

These five windowed Haworthias $1.00 postpaid:
H. planifolia, 2 in.
H. cymbiformis, 2 in.
H. turgida, 1½ in.
H. decipiens, 1 in.
H. tenera major, 1 in.

Californians include 2½% Tax
Free—Illustrated Catalog No. 7
KNICKERBOCKER NURSERY
P.O. Box 391, Carlsbad, California

MELSETTER ALOE NURSERIES
South Africa
Imported South African succulent plants. Send for list to United States representative, P. O. Box 1725, San Francisco, California.

MICHAEL DONNELLY CACTUS GARDENS
Rare cacti and succulents. Featuring the Don-Rita Brand. By appointment only.
334 Lowell Street—Daly City, California

RARE CACTI AND NOVELTIES
Price-list free of charge
FRITZ SCHWARZ
Apartado 347, San Luis Potosi, S.L.P., Mexico

DESERT CACTI
8 Desert Cacti with true botanical names and cultural directions postpaid $1.00. No Opuntias.
GUY QUINN
Route 2, Eastland, Texas

ILLUSTRATED ORCHID CACTUS CATALOGUE
Contains brief descriptions of 375 hybrids. History and culture make this an outstanding catalogue. The 32 pages contain 16 hybrids in color and 24 other illustrations. Order your copy now so that you may do the right thing with your Epiphyllums before resting them this fall. Send 25c to CACTUS PETE, 5440 Valley Blvd., Los Angeles, California.

CACTI AND SUCCULENTS RETAIL
We solicit mail orders. Send for free price list.
HUTCHINGS NURSERY
360 W. Colorado Glendale 4, Calif.

FOR SALE
Make an offer for the following used Journals and books:
Bound Journals Vols. 3 to 12 inclusive
35 odd copies 1931-1945
Britton and Rose, 7x10 reprint, 4 Vols. bound
SCOTT E. HASELTON
Box 101 Pasadena, Calif.

MEXICAN CACTI AND OTHER SUCCULENTS
Specially selected and very beautiful
Please ask for free price list or special offer of crests, clusters, and show-plants as well as collections.
L A Q U I N T A
Viveros de Cactáceas y Otras Plantas Suculentas
FERNANDO SCHMOLL
Cadereyta de Montes, Qro., México

Cactus Booklet FREE. Sixteen page fully illustrated booklet absolutely free. Limited Edition. Mail a card to-day. Fitzpatrick's Cactus Gardens, Dept. 100, Edinburg, Texas.

COMMERCIAL DEALERS

QUALITY HILL CACTUS HOME
CACTUS AND SUCCULENTS—RETAIL ONLY
559 Evanston Ave. Kansas City, Mo.

ALBERT AROZENA NURSERY
WHOLESALE GROWERS CACTI AND SUCCULENTS
1518 E. Rosecrans Compton, Calif.

CACTUS PETE
CACTI, SUCCULENTS, AND EPIPHYLLUMS
5440 Valley Blvd. Los Angeles, Calif.

COOVER COLLECTIONS
CACTI, SUCCULENTS, CRYPTANTHUS, EPIPHYLLUMS
2018 S. Summerlin Orlando, Florida

SWANSON CACTUS GARDENS
CACTI AND SUCCULENTS
1201 Gardena Blvd. Gardena, Calif.

DE WAYNE CACTUS GARDENS
CACTI AND SUCCULENTS—WHOLESALE AND RETAIL
846 Geneva Ave. San Francisco 12, Calif.

COOLIDGE RARE PLANT GARDENS
"THE JEWELED CORRIDOR" OF EPIPHYLLUMS.
RETAIL. NO MAIL-ORDERS.
889 N. Foothill Blvd. Pasadena, Calif.

FITZPATRICK'S CACTUS GARDENS
CACTI AND SUCCULENTS—RETAIL
Rt. 3, Edinburg Texas

PIRTLES CACTUS GARDEN
CACTI, SUCCULENTS AND SEED—WHOLESALE, RETAIL
Route 1. Edinburg, Texas

BEAHM GARDENS
EPIPHYLLUMS—WHOLESALE AND RETAIL
2686 Paloma St. Pasadena 8, Calif.

NEWELL AND WILSON
CACTI—SUCCULENTS—RETAIL, WHOLESALE
Australian customers only
Surrey Hills, E. 10 Victoria, Australia

"LA QUINTA," Fernando Schmoll, owner
SEEDS AND PLANTS—CACTI AND SUCCULENTS
Cadereyta de Montes, Qro. Mexico

KREJCI GARDENS
CACTI AND SUCCULENTS—WHOLESALE AND RETAIL
10,002 Sharp Ave. Pacoima, Calif.

F. G. TAYLOR
CACTI AND SUCCULENTS—WHOLESALE-RETAIL
2410 La Rosa Dr. Temple City, Calif.

JOHN POINDEXTER NURSERY
CACTI AND SUCCULENTS—WHOLESALE AND RETAIL
P. O. Box 391 Carlsbad, Calif.

MACDOUGALL RARE IMPORTS

The following rare plants are offered in a limited number of sets $5 postpaid in U.S.A.

One cutting of *Nopalxochia Conzattianum,* a new species recently described and pictured in February Journal.

Two of Number A.124. Unclassified epiphytic cactus with bright red diurnal flowers (distributed last year as "three-angled, variety unknown").

One seedling of A.44—a five or six-angled cactus, not classified, OR

One Number A.153 (only 10 cuttings available).

Order a set of these rarities and report your observations. No replacements, or guarantee that they are new species (except the first item).

BEAHM GARDENS
2686 Paloma St. Pasadena, Calif.

Euphorbia Review, complete, is now reduced to $5.00 unbound. This will be a rare item in a few years. Order now.